3: Barrett E-5 (1908-1909)1925
SD6 Cayapa SD6

It is then roughly hollowed out with the ax, the sides and bottom being left considerably thicker than is desired in the finished canoe. Frequently it is necessary to do this part of the work at a considerable distance from the river, and even at a considerable elevation above one of the small creeks or esteros tributary to the river. Such was the case with the large canoe shown in pls. LXX, LXXI, which was made at a distance of nearly three miles from the river and two and a half miles from the navigable waters of the nearest estero. Furthermore, the tree from which the canoe was fashioned grew near the top of a ridge about three hundred and fifty feet above the floor of the narrow valley of the estero, and the sides of this ridge were so steep that it was necessary to snub the canoe down to the estero by means of a couple of stout cables. Having worked out such a canoe to approximately its final form, it is turned up on one side and bound to one or two vertical stakes, as shown in pl. LXX. At the same time it is raised a few inches off the ground by means of blocks in order to prevent rotting. It is then allowed to dry and cure in the shade for several weeks. 396

Finally the owner invites a number of friends to join in hauling the canoe to a point where it may be floated. This task may be a comparatively simple one if the canoe is practically on a level with the river, but if it is at a considerable elevation, much care is needed. Also, the size of the canoe is an important factor. A small canoe may be hauled by one or two persons; but a large one, say one twenty-five or thirty feet in 483 [476]

3: Barrett E-5 (1908-1909)1925
SD6 Cayapa SD6

483 length, requires the labor of ten or a dozen persons. In the case of the large canoe shown in the illustrations three pairs of small holes were cut into its gunwales—one pair near each end and one at the middle—and to these were fastened three green wooden bars about an inch in diameter and projecting six or eight inches on each side of the canoe, thus serving as grips or handles for the haulers. The process of cutting the holes for these cross-bars is shown in pl. LXXI. Such bars must not be bound tightly to the gunwales, but of such looseness that they may be slipped in and out of the lashings, as is often necessary in passing close to a tree. A trail is carefully cut through the jungle, the trunks of small trees being thrown across it at intervals of a foot to four or five feet, in order to keep the canoe above the ground, thus greatly reducing the friction as the craft is moved along.

If the site of the construction of the canoe is at a considerable elevation, it must be let down carefully to the lower level by way of an incline. To accomplish this there are first wedged in at the prow and stern of the canoe two short transverse bars just below the level of the gunwales. From a large tough vine or aerial root, said to come from a plant called in the local Spanish matamba, and in Cayapa bī'ta, are twisted two-ply cables, such as that shown in pl. XCI, 5, and often as much as sixty or seventy feet in length. One of these is tied with a simple knot to each of the transverse bars above mentioned. The forward cable is passed with a half-hitch about the prow of the canoe and is

PLACING OF CROSS-BARS FOR TRANSPORTING THE CANOE

[p 152(e)]

463
501

3: Barrett E-5 (1908-1909)1925
SD6 Cayapa SD6

3: Barrett E-5 (1908-1909)1925
SD6 Cayapa SD6

bound securely at the point at which the cable crosses itself in making the half-hitch in order to prevent this from slipping off the prow. The one at the stern passes directly over the notch which is always present at each end of the canoe, and is bound to the point of the stern in such manner as to prevent slipping to either side, thus keeping the stress of the cable directly upon the short cross-bar and avoiding the danger of wrenching the bar loose by a sidewise pull. By snubbing with these cables, a large canoe may be lowered with comparative ease down a very steep incline. To accomplish this, a single turn is taken with the rear cable about the trunk of a tree, and by slacking off the canoe is let slowly down until the end of the cable is nearly reached. Meanwhile the forward cable has been passed about a tree and snubbed in the same manner to prevent accident to the rear cable. Having finally neared the end of the rear cable, the forward cable is made fast and the canoe held in position while the rear cable is taken down-hill and passed about a tree near the canoe in the same manner as above described. Then the two cables are paid out again until the end of the forward cable is reached, when the canoe is again halted and the forward cable taken down the hill as was the rear one. Thus, by this process of snubbing with the two cables, the probability of losing control of the heavy craft is eliminated. All this time, of course, the haulers are at the sides of the canoe helping to steady and guide it. One person only is needed to pay out each of the cables. Care is taken in snubbing a canoe down in this manner to see that

3: Barrett E-5 (1908-1909)1925
SD6 Cayapa SD6

it does not slide from its course and strike a tree. Finally, when the bottom of the incline is nearly reached, both cables are released and the canoe is allowed to take its course over the remaining short distance to the floor of the valley, its momentum usually carrying it for some yards out on the plain.

Having reached the level of the estero or river, the hauling is now done entirely by hand until the canoe is finally launched. If launched in a small creek, it is often necessary still to haul it by hand for a distance down the creek, since it must be passed over sand-bars and even lifted over large logs, but small ones are always cut away. At last a point is reached where there is sufficient water to float the canoe down to the river. Sometimes, however, it is deemed advisable to haul the canoe only as far as a point on the estero known to be reached by floods; it is then tied to a tree until such time as the back-water of the river extends far enough to allow the canoe to be paddled down to the main stream.

In either case the canoe is finally taken to the house. If it is small, it may be taken into the house, but if a large one, it is more frequently placed under the house or in a nearby grove of palms or trees. It must then be worked and smoothed by means of adz and planes until reduced to the required thickness, and the desired form and finish are obtained, when it is placed in a dry, shady place to season thoroughly before being calked and painted with brea. In adzing the canoe it is placed in a normal upright position and the inner surface